



#6/BW 1713
41403
PATENT

Customer No. 22,852
Attorney Docket No. 02734.0341-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Kang G. YEH et al.) Group Art Unit: 1731
)
Application No.: 10/022,538) Examiner: P. Chin
)
Filed: December 20, 2001)
)
For: METHOD OF MAKING A NON)
COMPACTED PAPER WEB)
CONTAINING REFINED LONG)
FIBER USING A CHARGE)
CONTROLLED HEADBOX AND A)
SINGLE PLY TOWEL MADE BY)
THE PROCESS)

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Commissioner for Patents
Washington, DC 20231

Sir:

REQUEST FOR RECONSIDERATION

In reply to the Office Action of October 1, 2002, no shortened statutory period having been set and thus, no extension being required, Applicants respectfully request the reconsideration of the pending claims in view of the following remarks.

REMARKS

Currently, claims 16-30 are pending in the application. No claim has been amended. In the Office Action, the Examiner rejects all pending claims. Specifically, claims 16-30 are rejected under the doctrine of obviousness-type double patenting over claims 1-8 of U.S. Patent No. 6,419,789. Claims 16-30 were also rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,318,669 to Dasgupta in view of U.S.

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Patent No. 5,397,435 to Ostendorf et al. or U.S. Patent No. 5,437,766 to Van Phan et al. Applicants respectfully traverse these rejections.

I. Obviousness-Type Double Patenting Rejection

All claims were rejected under the doctrine of obviousness-type double patenting over claims 1-8 of U.S. Patent No. 6,419,789. Applicants respectfully request that this rejection be held in abeyance until allowable subject matter is indicated.

II. The Claims Are Not Obvious Over the Cited Prior Art

The Examiner rejected all claims under 35 U.S.C. § 103(a) as obvious over Dasgupta in view of Ostendorf et al. or Van Phan et al. The Examiner claims that Dasgupta discloses tissue and paper towels which contain the claimed cationic wet strength agent and anionic dry strength agent in a ratio of 1/20 to 10/1 at a concentration of 0.1 to 2% by weight. Office Action at 2. The claimed strength, stiffness, and stretch characteristics are said to be "obvious optimizations" in view of the teachings of Ostendorf et al. or Van Phan et al. The Examiner also states that "[w]hether or not the cationic wet strength agent and anionic dry strength agent to the pulp during the process of making the paper is moot because the amount of these agents in the final paper product is the same.¹"

¹ Applicants respectfully submit that the meaning of this statement is unclear. Applicants presume the Examiner meant to state that "whether or not the **amount** of cationic wet strength agent and anionic dry strength agent **which is added** to the pulp during the process of making the paper **is controlled** is moot because the amount of these agents in the final paper product is the same," and will respond accordingly. If Applicants have understood the Examiner's intentions incorrectly, a clearer statement of the grounds for rejection is respectfully requested in the next Office Action.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness, as required by law. One element of the legally required *prima facie* case is that the Office must show that the prior art teaches or suggests each and every element of the claimed invention. See *In re Wilson*, 424 F.2d 1382, 1385 (C.C.P.A. 1970). Because the Examiner has failed to carry this burden, Applicants request withdrawal of the rejections and allowance of the pending claims.

First, Applicants question the Examiner's conclusion that the cited references disclose final products with the same strength, softness and absorbency characteristics displayed by the present invention. The Examiner has not set forth any teaching from the prior art which shows the claimed ranges for machine direction stretch, cross-direction wet strength, or tensile modulus of stiffness which are achieved by the present invention. Rather, the Examiner claims that such characteristics may be achieved by mere optimization of the amount of wet strength agent, softening agents, or foreshortening of the web as disclosed in Ostendorf et al. or Van Phan et al. However, these references do not teach compositions which possess the characteristics of the claimed products, nor would it have been obvious to one of skill in the art to obtain these characteristics.

Applicants respectfully submit that obtaining products with the same superior strength, softness, and absorbency as the products of the present invention is not merely "obvious optimization" of the prior art processes. As noted in the specification, the production of "away-from-home" paper towels is typically constrained by cost concerns. The prior art products cited in the specification, as well as those cited by the Examiner, have addressed these cost concerns by producing products with low

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strength, softness, or absorbency. However, through the use of the present invention, Applicants have been able to maintain a low-cost product while improving strength, softness, and absorbency. Applicants respectfully direct the Examiner's attention to the Examples of the present specification, and specifically Figures 1-9 which show the claimed products' superior characteristics over those of the prior art.

Applicants also dispute that the prior art discloses products containing the same amount of cationic and anionic strength agents as that claimed. All pending claims recite that the cationic wet strength agent is present in an amount of from 15 to 30 lbs/ton, and further that the ratio of cationic and anionic strength agents is controlled to achieve a net charge within a certain range. None of the cited references disclose an amount of cationic wet strength agent within the claimed range, nor do any of the references disclose that the ratio of the cationic to anionic strength agent is controlled to achieve close to a net charge balance. For example, Dasgupta teaches broadly that the ratio of anionic to cationic additives may range from 1/20 to 10/1, but the reference nowhere suggests that the select ratio within that range should be picked because of the net charge of the papermaking furnish.

Nor is the fact that, in the present invention, the ratio of anionic to cationic strength agents is controlled to achieve a net charge within a specific range "moot." By controlling the ratio of cationic wet strength agent and anionic strength agent such that the net charge is zero or slightly anionic, the resulting web has excellent softness, absorbency, and strength. The Examiner has not set forth any teaching from the prior art which shows the claimed ranges for machine direction stretch, cross-direction wet strength, or tensile modulus of stiffness which are achieved by the present invention.

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In conclusion, the cited references simply do not disclose a web with the superior characteristics achieved by the present invention, in which the amount of cationic wet strength agent and anionic strength agent is controlled so that the net charge of the web when formed from an aqueous stream is maintained in the range of from less than about zero to about $-115 \text{ meq} \times 10^{-6}$ per 10 ml. The Examiner therefore has failed to show that the cited prior art references, alone or in combination, teach or suggest each and every element of the claimed invention, as required by the *prima facie* case of obviousness.

In view of the foregoing remarks, Applicants respectfully request the reconsideration and further examination of this application and the timely allowance of the pending claims. Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: April 1, 2003

By: 

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April 1, 2003

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Enclosures:

1. Request for Reconsideration - 5 page
2. Postcard

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